Carcinoma of Middle Ear and Mastoid

Introduction

- Rare condition; 1 case in 20,000 new patients examined

- Most common primary middle ear malignancy

Aetiology

- **Age**: 40-60 years
- Slight female predominance
- Associated with long-standing ear discharge (75%)

Chronic irritation as a causative factor in such cases.

- Some cases are seen in radical mastoid cavities.
- Primary carcinoma of mastoid air cells is

Pathology

- **Origin**: primarily Middle ear or extension from deep meatus
- **Squamous cell carcinoma**: Most common variety
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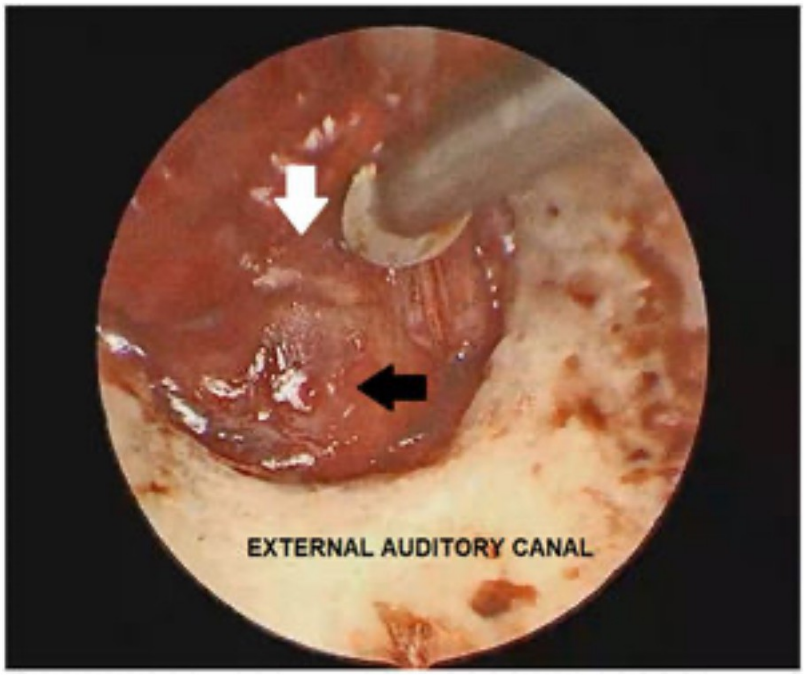
Adenocarcinoma:occasionally ;Arises from glandular elements of middle ear

Squamous cell carcinoma

Source : Dept of Radiotherapy’university of Mohamed VI of Tangier,Tangier,Morocco

Adenocarcinoma



Source : University of Campinas, Faculty of Medical Sciences, Department of Otorhinolaryngology, Campinas, SP, Brazil

Spread of Tumour

- Destroys ossicles, facial canal, internal ear
- Invades jugular bulb, carotid canal, mastoid
- May spread to parotid, TMJ, infratemporal fossa, nasopharynx
- Lymph node involvement occurs late

Clinical Features

- Mimics chronic suppurative otitis media
- Following features in age group of 40-60 years may arouse suspicion of malignancy:
  - Chronic foul-smelling discharge especially blood-stained
  - Severe nocturnal pain
  - Facial palsy
  - Friable, hemorrhagic polyp or granulation
  - Increase in Hearing loss or vertigo

Diagnosis

- Biopsy for definitive diagnosis
- Extent of disease is judged by clinical and radiological examination.
- CT scan and angiography are useful in the assessment of disease.

Treatment

- Surgery + Radiotherapy = Best results
- Surgical options:
  - Radical mastoidectomy
  - Sub-total/total petrosectomy
- Palliative radiotherapy:For cranial nerve involment or intracranial spread or spread to nasopharynx

Radical mastoidectomy

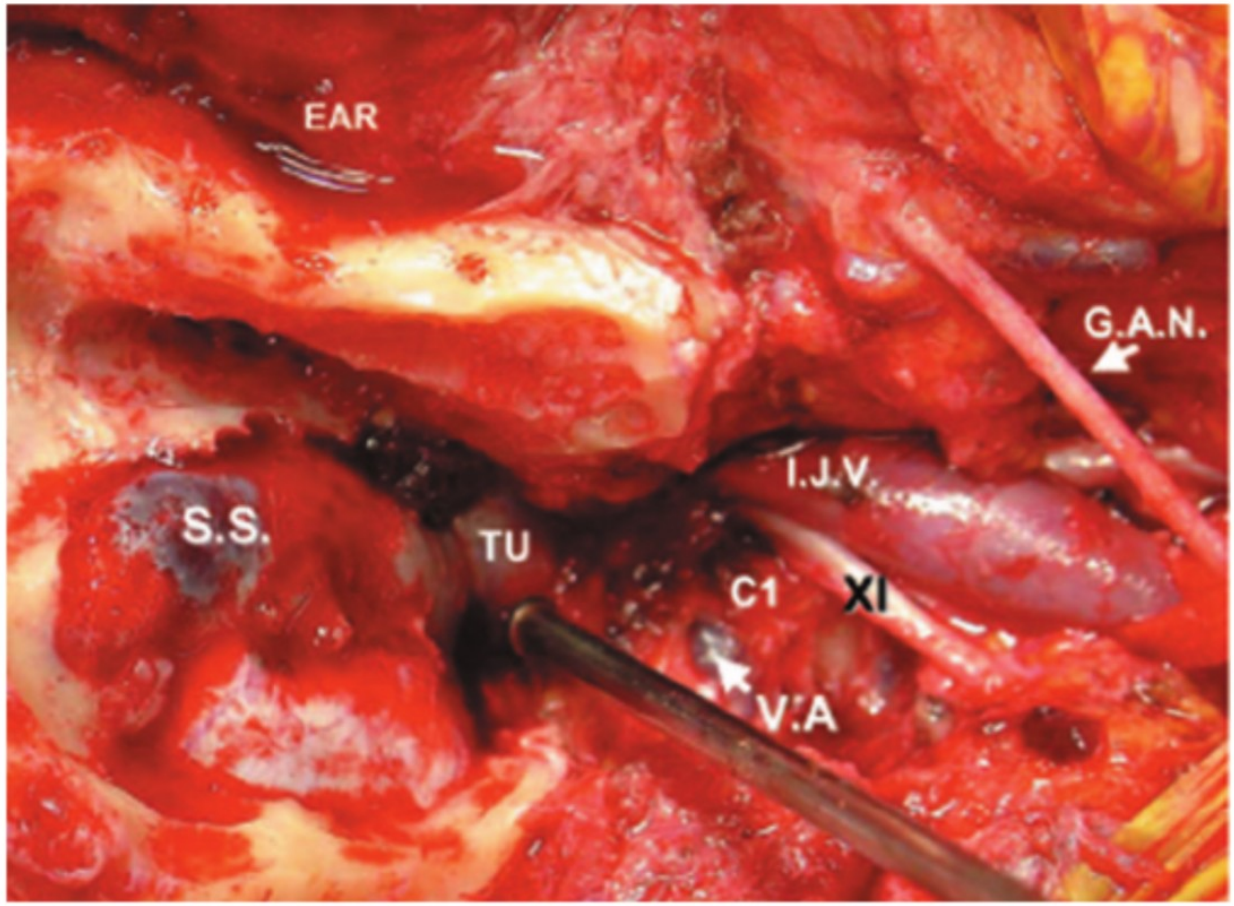


FIGURE 9. *Radical mastoidectomy and craniotomy. Tumor in the jugular bulb* (TU). S.S., *sigmoid sinus;* VA, *vertebral artery;* C1, *lateral process of C1;* XI, *cranial nerve;* I.J.V., *internal jugular vein;* G.A.N., *great auricu-*

Source: http://dx.doi.org/10.1055/s-2007-984240

Sarcomas

- **Rhabdomyosarcoma**:

-It is a rare tumour, mostly affecting children.

-Arises from the embryonic muscles tissue or the pluripotential mesenchyme.

- In early stages, it mimics chronic suppurative otitis media with ear discharge, polyp or granulations.

•Diagnosis is made only on biopsy. Prognosis is poor.

Radiation+ chemotherapy =treatment of choice. Surgery is done in selected local-ized lesions.

• **Other sarcomas:**

Osteosarcoma, lymphoma, fibrosarcoma and chondrosarcoma are rare. Distant metastases are seen in the lungs or bone. Prognosis is poor.

Rhabdomyosarcoma

Source : Dhingra

Secondary Tumours

- Extension from EAM, parotid or nasopharynx

  -Via preformed pathways or bone erosion

- Temporal bone: Site for distant metastases

  - From breast, bronchus, prostate, kidney, GI tract

Thank you